

Work Order ID 137692

Wednesday, October 07, 2015 12:43:23 PM

137692

Page 1

Item ID: D6101-015

Accept

N900040100

Setup Start ***NS1***

Revision ID:

OCT 09 2015

Item Name: Saddle Billet

Stop ***NS2***

Start Date: 10/26/15 Start Qty: 20 ~~10.00~~

10

Cust Item ID:

Required Date: 10/27/15 Req'd Qty: 10.00 ~~10.00~~

10

Customer:

Reference:

Approvals:

Process Plan: MW

Date: OCT 09 2015

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D6101	B								

100

0.00

100

PURCHASING

Purchasing

Memo

0.00

Purchasing

Issue P/O: 30081

- a) Description: Alluminum billet
- b) 9.450" x 6.250" x 2.50" thick (+0.030 / -0.000)
- c) Tolerance on all dimensions are +0.030/-0.000"
- d) Grain direction along 9.450" length
- e) Material: 7075-T7351 (QQ-A-250/12)
- f) Material certification required

cZ OCT 09 2015 20

110

Receive & Inspect for Damage & Mat'l Certs

0.00

110

Packaging

Memo

0.00

Packaging

Ensure material certification is attached

20x 8015-11-04

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____							
Misidentified	☐	Past Due	☐								

Work Order ID 137692

Wednesday, October 07, 2015 12:43:23 PM

137692

Page 2

Item ID: D6101-015 Accept ***N19000040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Saddle Billet
Start Date: 10/26/15 Start Qty: 10.00 ***10*** Cust Item ID:
Required Date: 10/27/15 Req'd Qty: 10.00 ***10*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC6- Inspect dimensions to drawing	0.00							DAS 14 9-89
120						20	0		15/11/09
QC	Memo	0.00							
Quality Control	Ensure Material certification comply to Dwg D6101								
130	Identify as per dwg & Stock Location: MAT045	0.00							DAS 14 9-89
130						20	0		15/11/09
Packaging	Memo	0.00							
Packaging	LOCATION: MAT045								
140	QC21- Final Inspection - Work Order Release	0.00							
140									NOV 09 2015
QC	Memo	0.00							
Quality Control									

20151109

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____			
Misidentified	☐	Past Due	☐				

Picklist Print

Wednesday, October 07, 2015 12:43:23 PM

Page 1

Work Order ID: 137692

137692

Parent Item: D6101-015

D6101-015

Parent Item Name: Saddle Billet

Start Date: 10/26/15

Required Date: 10/27/15

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP RevA: New issue DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D6101-015P

Purchased

No

110

Each

0.0000

1

D6101-015P

ALUM BILLET

~~10~~
20

20x

SP/IS-11-04

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

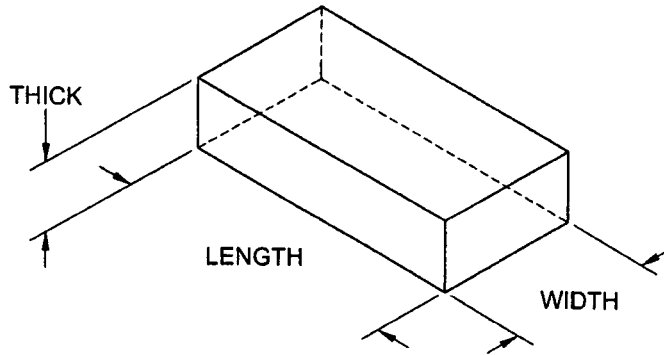
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____			
Misidentified	☐	Past Due	☐				

SPECIFICATION CONTROL DRAWING



SHOP COPY
 RETURN TO
 ENGINEERING
 UNCONTROLLED COPY
 SUBJECT TO AMENDMENT
 WITHOUT NOTICE
 WORK ORDER
 NO. 137692-115
 15-10-08

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.030/-0.000), AND GRAIN DIRECTION AS SHOWN.

TOLERANCES ON ALL DIMENSIONS ARE +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

B ACCEPTABLE SPECIFICATIONS FOR 7075-T7351 ALUMINUM ARE AMS-QQ-A-250/12, QQ-A-250/12, OR ASTM B209

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6101-001	7075-T7351 (QQ-A-250/12)	6.000	6.250	2.000	Along 6.000 Length
D6101-003	7075-T7351 (QQ-A-250/12)	7.875	6.250	2.000	Along 7.875 Length
D6101-005	7075-T7351 (QQ-A-250/12)	5.000	8.250	2.500	Along 5.000 Length
D6101-007	7075-T7351 (QQ-A-250/12)	7.750	8.250	2.500	Along 7.750 Length
D6101-009	7075-T7351 (QQ-A-250/12)	8.700	8.250	2.500	Along 8.700 Length
D6101-011	7075-T7351 (QQ-A-250/12)	9.700	8.250	2.500	Along 9.700 Length
D6101-013	7075-T7351 (QQ-A-250/12)	10.100	8.250	2.500	Along 10.10 Length
B D6101-015	7075-T7351 (QQ-A-250/12)	9.450	6.250	2.500	Along 9.450 Length
D6101-017	7075-T7351 (QQ-A-250/12)	6.350	6.250	2.250	Along 6.350 Length

RELEASED

09/01/15/W

B	ADDED D6101-015/-017, ADD ASTM B209	RF	09.04.23
A	NEW ISSUE	CP	01.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D6101	SHEET 1 OF 1
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	SADDLE BILLET, 7075	NTS
DATE	09.04.23	COPYRIGHT © 2001 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO30081**

Purchase Order Date 10/9/2015

PO Print Date 10/9/2015

Page Number 1 of 2

Order From :

VU-MET002

Ship To : DART AEROSPACE LTD

METAUX CASTLE
P.O. BOX 4090 STN A
TORONTO, ONTARIO M5W 0E9
CANADA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

Ship To Contact

Ship To Phone

Ship Via: Yours ppd

Ship Acct:

Buyer

Customer POID

Customer Tax #

Terms

Currency

FOB

Chantal Lavoie

10127-2607

Net 30

USD

Destination-Collect

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	D6101-001P	7075-T7351 2X6X6.25	10/23/2015 Yes 10/23/2015		20.00 Each	\$32.25	\$645.00
AS PER DWG D6101 REV. B B137692 SIZE: 6.00" X 6.250" X 2.00" THICK GRAIN DIRECTION ALONG 6.00" LENGHT MATERIAL: 7075-T7351 QQ-A-250/12 TOLERANCE AS PER QUOTE +.030"/-.000"							
Line Total:							\$645.00
2	D6101-015P	ALUM BILLET	10/23/2015 Yes 10/23/2015		20.00 Each	\$69.60	\$1,392.00

AS PER DWG D6101 REV. B
B137755 B137692 C415/11/05
size: 9.450" X 6.250" X 2.50" thick
Tolerance on all dimensions are +0.030"/-0.000"
Grain direction along 9.450" length
Material: 7075-T7351 (QQ-A-250/12)

2015-11-04

Note:

10/9/2015

**Castle Metals®**

A. M. Castle & Co.

PACKING SLIP/
CERTIFICATE OF CONFORMANCE

Page 1 of 2

Shipment No:2777119

Ship From:		Sold To:		Ship To:		Deliver To:	
A. M. Castle & Co. (Canada) Inc. TORONTO - CASTLE METALS 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7		DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		DART AEROS,HAWKESBURY,O N,CAN 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN		DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
Date Shipped	F.O.B.	Freight Terms		Carrier		BOL No	
03-NOV-2015	ORIGIN	Prepaid		MANITOULIN		2777119-2	

Shipment Details	Final Destination Branch - TOR
-------------------------	---------------------------------------

Order No 4094849	Line No 1	Item No 752241.MO	Description 2.5000.PL.7075.T7351.ALUMINUM.USI. 6.25" X 9.45" CUT RECTANGLE TO 6.25 IN () X 9.45 IN () SPECIFICATIONS: AMS-QQ-A-250/12 ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #S Email P/s and certs to: clavoie@dartaero.com				
Purchase Order No 30081	Part Number YOUR ITEM NUMBER: D6101-015		Ordered Qty 20.00 PCS		Invoice Qty 20.00 PCS		
Details			ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #S Email P/s and certs to: clavoie@dartaero.com END USER: DART AEROSPACE END USE: COMMERCIAL AIRCRAFT PARTS				
Delivery No. 120233959	Mill	Heat Number 	Mech Id	PCS 20	Width (IN)	Length (IN)	Shipped Qty(LBS) 152.7121

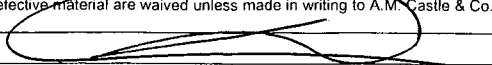


Castle Metals®

A. M. Castle & Co.

PACKING SLIP/
CERTIFICATE OF CONFORMANCE

Page 2 of 2

These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is Prohibited.		
We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.		
Reviewed by Authorized Castle Metals Representative:		Date: Name:

NOV 03 2015



CERTIFIED INSPECTION REPORT

Alcoa Inc.

DAVENPORT WORKS 4879 State Street Bettendorf, IA 52722

We hereby certify that the material covered by this certificate has been inspected with, and has been found to meet the applicable requirements described therein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and had the mechanical properties shown on the face of this sheet.

This test report shall not be reproduced except in full, without the written approval of the Quality Department. No alteration, addition or other change is authorized to be made to this certificate. The recording of false, fictitious, or otherwise fraudulent statements or entries on this certificate by any recipient may be punished as a felony under applicable law.

Per:

Rob Woodall

Rob Woodall
Director of Manufacturing Davenport Works

Terrence Thom

Terrence Thom
Quality Assurance Manager

Ship From: RIVERDALE, IA.

2774986	0			
Ship Date	B.L. No.	Invoice No.	Alcoa No.	Item
2015-09-24	10302333	00000	1000751115-9	DP-51115-01-9
P.O. No./Govt Contract No.	Customer		Alcoa Item	
078790 Ln#: 09			G041015520R26	

Page 1 of 2

Ship To:

Item Description
2.5 IN TK (+.075 -.075) X 48.5 IN W (+.3125 -.3125) X 144.5 IN LN (+.5 -.0) CAT D 164168 (N) A/T 7075
T7351 RECTANGLE MILL FINISH, US1 3MM DEAD ZONE REQ'D BOTH SIDES,
SAWED, AMS-QQ-A-250/12 REV A AMS-STD-2154 REV A EXC MRK AMS4078 REV J EXC MRK
ASTMB209 REV 14 ASTM B594 REV 13 BSS7055
REV B EXC MRK MMS159 REV T PS21211 REV M
((MARKED)) KRAFT PAPER INTERLEAVED
MAX GROSS SKID WGT: 4500 LB QUAN TOL +/-
20 * US1 CL A 3 MM CQR D164168 REV 38 CUST REQ 15-09-
22 *** W/E 15-09-26 ***

Num	Package Ticket	Lot	Weight	Quantity	UOM	Pc Id/Serl	Inspector Clock Numbers
1	763061	383791	3576	2	PC		47218

Notes for CQR: D164168.38
PRODUCT PRODUCED TO THE REQUIREMENTS OF MIL-STD-2154 ALSO MEET THE REQUIREMENTS OF AMS-STD-2154 REV A. PRODUCT PRODUCED TO THE REQUIREMENTS OF AMS-STD-2154 REV A ALSO MEET THE REQUIREMENTS OF MIL-STD-2154.
PRODUCT PRODUCED AND MARKED TO THE REQUIREMENTS OF AMS-QQ-A-250/12 ALSO MEETS THE REQUIREMENTS OF QQ-A-250/12. PRODUCT PRODUCED AND MARKED TO THE REQUIREMENTS OF QQ-A-250/12 F ALSO MEETS THE REQUIREMENTS OF AMS-QQ-A-250/12.
THIS MATERIAL HAS BEEN ULTRASONICALLY INSPECTED FULLY IMMERSION - TYPE I.

CQR: D164168.38 -Specification Limits

Dir	UTS	TYS	ELAD
	KSI	KSI	PCT
T7351 Long Transv.	Max 63.9	63.9	6
	Min 66.0	52.0	
T7351 Elec. Cond. (EC) * MIN 38.0 PCT			

DAS
14
9-89

15/11/09

CERTIFIED INSPECTION REPORT

Alcoa Inc.

DAVENPORT WORKS 4879 State Street Bettendorf, IA 52722

We hereby certify that the material covered by this certificate has been inspected with, and has been found to meet the applicable requirements described therein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and had the mechanical properties shown on the face of this sheet.

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Per

Rob Woodall

Rob Woodall

Director of Manufacturing Davenport Works

Terrence Thom

Terrence Thom

Quality Assurance Manager

Ship From: RIVERDALE, IA.

2774986	0		
Ship Date	B.L. No.	Invoice No.	Alcoa No. Item
2015-09-24	10302333	00000	1000751115-9 DP-51115-01-9
P.O. No./Govt Contract No.	Customer	Alcoa Item	
078790 Ln#: 09		G041015520R26	

Page 2 of 2

CQR: D164168.38 -Specification Limits (cont.)

Chemical Composition	SI	FE	CU	MN	MG	CR	ZN	TI	Other	Other
Max	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.15
Min			1.2		2.1	0.18	5.1			

Alloy: 7075

Lot: 383791

- Mechanical, Physical, Metallography, Quantometer Results

REMAIN

Temp	Dir	No->	UTS	TYS	ELAD
7351	Long Transv.	3	69.6	58.8	10.4
			69.7	58.9	10.3
			69.3	58.5	10

T7351 Elect Cond %IACS 41.4 41.5 41.5 PCT

Cast Number	Chemical - OES	SI	FE	CU	MN	MG	CR	ZN	TI
H9027064	Actuals	0.07	0.27	1.6	0.02	2.5	0.19	5.6	0.02

This material was melted in the United States or a Qualifying Country [REF DFARS 225.872.1(a)]; it was manufactured in the United States

DAS
14
9-89

1/11/09

MATERIAL RECEIPT INSPECTION FORM

MATERIAL D6101-015
 DATE 15/11/09

PO / BATCH NO 30081/137692

MATERIAL CERT RECD yes
 QUANTITY RECEIVED 20
 QUANTITY INSPECTED 20
 QUANTITY REJECTED _____

THICKNESS ORDERED 9.45X6.25X2.50
 THICKNESS RECEIVED 9.45X6.25X2.50
 SHEET SIZE ORDERED _____
 SHEET SIZE RECEIVED _____

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	☒ N	
CORRECT FINISH	☒ Y	N	
CORROSION	Y	☒ N	
CORRECT GRAIN DIRECTION	☒ Y	N	
CORRECT MATERIAL	☒ Y	N	
CORRECT THICKNESS	☒ Y	N	
PHOTO REQUIRED	Y	☒ N	
CORRECT MATERIAL	☒ Y	N	
CORRECT REF # TO LINK CERT	☒ Y	N	
CORRECT MATERIAL IDENTIFICATION	☒ Y	N	
CORRECT M# ON THE MATERIAL	☒ Y	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	☒ N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	☒ N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK RECORD RESULTS BELOW				
TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D
SIZE OF TEST SAMPLE				
HARDNESS / DUROMETER READING				

Testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)
INSPECTED BY <u>DAS</u> <u>14</u> DATE <u>15/11/09</u>	SIGNED OFF BY _____ DATE _____	

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

MATERIAL RECEIPT INSPECTION FORM

INSTRUCTIONS FOR INSPECTING BAR, TUBING, ROUND, & SHEET STOCK

1. VERIFY STOCK TO DART PURCHASE ORDER
2. MEASURE ALL DIMENSIONS FOR EACH PURCHASED STOCK
 - a. WIDTH, THICKNESS, DIAMETER, WALL THICKNESS & LENGTH
3. VERIFY CONDITION OF MATERIAL (e.g. DAMAGED, CORRODED, etc)
4. VERIFY THAT SUPPLIER HAS A NUMBER (HEAT #) ON ITS RECEIVING REPORT TO LINK TO MATERIAL CERTS
5. VERIFY MATERIAL CERTS ARE CORRECT TO THE DART PO INSTRUCTIONS
6. REMOVE / CUT A PIECE OF MATERIAL FOR SAMPLE HARDNESS TESTING

INSTRUCTIONS FOR INSPECTING SKIDTUBE & STEP EXTRUSION

1. VERIFY TO DART SUPPLIED DRAWING
 2. SAMPLE INSPECT MATERIAL IN BUNDLE TO ENSURE MATERIAL CAN BE RECEIVED INTO DART
 3. USING PORTABLE HARDNESS TESTER VERIFY HARDNESS OF THE MATERIAL TO THE DRAWING
 4. VERIFY THAT MATERIAL CERTS MATCH TO WHAT'S CALLED UP ON THE DART DRAWING
- AFTER MATERIAL PASSES INSPECTION**
5. HAVE DART EMPLOYEES START STOCKING MATERIAL BUT REQUEST MIN 20pcs FOR FULL INSPECTION
 6. INSPECT ALL DIMS AS PER DRAWING REQUIREMENTS

INSTRUCTIONS FOR INSPECTING CROSS TUBE MATERIAL

1. VERIFY MATERIAL CERTS MATCH THE REQUIREMENTS ON THE DART DRAWINGS
2. INSPECT MIN. HALF THE BATCH OF EXTRUSION RECEIVED INTO DART
3. INSPECT MATERIAL AS PER THE EXTRUSION REPORT
 - a. WALL THICKNESS USING ULTRA SONIC IN 4 LOCATIONS
 - b. OUTSIDE DIAMETER HIGHEST/LOWEST BOTH ENDS
 - c. INSIDE DIAMETER HIGHEST/LOWEST BOTH ENDS
 - d. STRAIGHTNESS @ CENTER OVER 12' SPAN
 - e. WALL THICKNESS USING TUBE MICROMETER HIGHEST/LOWEST BOTH ENDS
4. IDENTIFY EACH TUBE IN SEQUENCE OF INSPECTING (TUBE 1, TUBE 2,) AND W/O# AND PO#
5. RECORD ALL FINDINGS ON EXTRUSION REPORT

IF ANY QUESTIONS PLEASE SEE OC COORDINATOR BEFORE GOING FURTHER